

4.3 TRANSPORTATION

This section describes the existing ground, waterborne, and airborne transportation environment of the project area. The standards used to judge transportation impacts are presented, and relevant policy guidance is reviewed. The section then evaluates the potential effects of the Proposed Project on these conditions, and identifies mitigation measures to eliminate or alleviate significant impacts. The nature of the Proposed Project eliminates some typical transportation issues from further consideration, including parking, public transit, and rail traffic. Due to the fact that no long-term transportation impacts are expected based on design of the Proposed Project, which requires minimal maintenance and/or management, the focus of the transportation analysis is upon the short-term construction-related effects of the pier removal project.

4.3.1 Regional Transportation Network

The project-related transportation network includes facilities that connect the construction workers with the Proposed Project site. The project site is, at a minimum, approximately 500 feet offshore; consequently, access to the project site itself is restricted to waterborne craft. Barges and other work vessels would initially be launched from the Port of Long Beach (LLB Siuslaw, M/V Kahu, and Tug Larcona) and the Santa Barbara Harbor (M/V Julie). The crew boat will make daily trips to and from Ellwood Pier to transport personnel and supplies. Each day, approximately 22 workers (all personnel except those residing on the M/V Kahu) would be coming ashore from Ellwood Pier via the M/V Julie. In addition, several agency observers would be transported from Ellwood Pier for day-to-day operations, and an aerial survey of the surrounding area would be conducted prior to explosives detonation. Once project activities have been completed, recovered materials will be brought by barge to the Port of Long Beach, and then transported over land to a recycling center in the Long Beach area. Approximately five semi-end dump truck trips will be required for transport of recyclable materials to the recycling center.

The study area evaluated in this transportation analysis consists of: 1) the project-related applicable roadway networks in relevant portions of Santa Barbara County and the Port of Long Beach; 2) the coastal waters between Long Beach Harbor, Santa Barbara Harbor and the project site; and 3) a four-mile (6.4 km) radius airspace above the Pacific Ocean along coastal Santa Barbara County, and the flight line between Santa Barbara Municipal Airport and the delineated survey zone.

4.3.1.1 Ground Transportation

The Proposed Project has the potential to affect ground transportation in Santa Barbara County (specifically the city of Goleta which is located immediately onshore from the project site) by daily personnel commuter traffic to and from the Ellwood Pier facility; and by the shipment of approximately five loads of recyclable materials from the Port of Long Beach to a recycling facility within the Long Beach area. Ground transportation at each of these areas is assessed below.

Intersections are the primary factor influencing the overall efficiency of operation of a roadway system and the Level of Service (LOS) is a measurement of the operating conditions at an intersection. The LOS is derived by comparing traffic volumes with roadway capacity. LOS A is the best traffic operation while LOS F is the worst. LOS C is the minimal level usually desired. Table 4.3-1 describes the six LOS categories.

Table 4.3-1. Level of Service (LOS) Categories

| Level Of Service | Volume /Capacity | Description of Traffic Operation |
|------------------|------------------|--|
| A | 0-.60 | Free flow, minimal delay due to random arrival during red traffic signal indication. |
| B | .61-.70 | Queues develop occasionally that may not be delivered during the first green light indication (i.e. wait through a red light). |
| C | .71-.80 | Stable flow (typically design level); approximately 30 percent of the green indications fail to deliver queues forming. Backups may develop behind turning vehicles. |
| D | .81-.90 | Approaching unstable flow; approximately 7 percent of the green indications fail to deliver the waiting queues. Delay may be substantial (waiting through 2 cycles of the traffic signal), but the queues occasionally clear during the peak hour. |
| E | .91-1.00 | Unstable flow, roadway is operating at capacity with long queues during the peak hour. |
| F | 1.01 or greater | Forced flow, jammed intersection, long delays are expected with drivers having to wait through more than 2 cycles of the traffic signals. |

Source: Santa Barbara County Resource Management Department, 1995.

Santa Barbara Area. The ground transportation network near the project area consists of U.S. 101 and Hollister Avenue (major arterial) along the coast, and State Route 217 linking the University of California with U.S. 101. The major intersections to the project area include Winchester Canyon Road/U.S. 101 off-ramp, Calle Real/Hollister Avenue, and Hollister Avenue/U.S. 101 ramps. Day-to-day access for agency personnel to the project site will be from the staging/parking area near Highway 101 and the Ellwood Pier access road. The Ellwood Pier access road is a paved two-lane roadway that forms an unsignalized intersection with Highway 101 approximately 2,000 feet west of Hollister Avenue.

The majority of the intersections in the area currently operate at acceptable levels of service during morning and afternoon peak hours. Table 4.3-2 lists the existing A.M. and P.M. peak hour levels of service for three intersections in the onshore vicinity of the project area.

Long Beach Area. The ground transportation network near the Port of Long Beach consists primarily of Interstate-710 (Long Beach Freeway). Use of the Long Beach Harbor in

relation to the pier removal project consists of mobilizing the Siuslaw LLB, M/V Kahu and Tug Larcona to the project site from the Long Beach Harbor, and the recycling of approximately five truck loads of applicable debris at an appropriate receiving facility within the Long Beach area.

Table 4.3-2. Caltrans Indicated Intersection Levels of Service in the Project Vicinity (Santa Barbara Area)

| Intersection | Control Type | Level of Service (LOS) | |
|---|--------------|------------------------|-----------|
| | | A.M. Peak | P.M. Peak |
| Hollister Ave./U.S. 101 Southbound ramps | 1-way stop | A | A |
| Hollister Ave./U.S. 101 Northbound onramp | 2-way stop | A | A |
| Calle Real - Winchester Canyon Rd./U.S. 101 Northbound off-ramp | 2-way stop | A | A |

Source: Santa Barbara County Public Works, Traffic Division, 2001

4.3.1.2 Waterborne Transportation

Commercial and recreational vessels (e.g., sailboats and excursion charters) utilize the ocean waters in the vicinity of the proposed project site. Navigation within the project area is facilitated by charts, aids to navigation (such as buoys), Port District information and regulations, and information published by the U.S. Coast Guard and the National Oceanic and Atmospheric Administration (NOAA). The U.S. Coast Guard distributes the most current local information in its Monthly Notice to Mariners and weekly updates. The project site is shown on Nautical Chart No. 18720, Point Dume to Purisima Point, 31st Edition printed on July 29, 2000.

Port of Long Beach. The Port of Long Beach, managed and operated by the Long Beach Harbor Department, is the busiest cargo container port in the United States, with a total of 104,740,787 metric revenue tons (MRT) through the harbor during the 1997 fiscal year. China and Japan were the top trading partners with a combined total 29,070,929 MRT. The top export products included bulk coke, chemicals, and bulk petroleum, the top import products include bulk petroleum, electric machinery, and plastic products, and the total vessel arrivals in the 1997 fiscal year was 4,601 (Port of Long Beach, 2003). Water depths in the port range from 36 to 76 feet mean-low low water (MLLW) adjacent to berths, to 50 to 90 feet MLLW within the channels (Port of Long Beach 2003).

The Siuslaw LLB, Tug Larcona and M/V Kahu are the only vessels transiting to the project site from the Port of Long Beach. They would likely travel through San Pedro Bay and past the breakwater, then follow the northbound coastwise traffic lane toward the project area. The tugboat and barge coming from the Port of Long Beach would travel approximately 104 nautical miles (120 miles or 193 km) to the project site.

Santa Barbara Harbor. Santa Barbara Harbor is adjacent to the city of Santa Barbara, California. It is a scenic small craft harbor serving local residents and tourists, as well as an all-weather safe harbor of refuge at the southern edge of the central coast region. The original harbor was built in 1928. Dredging of the entrance of the harbor is the responsibility of the Army Corps of Engineers, Los Angeles District, while the remainder is managed by the Santa Barbara Waterfront Department, which was established under Title 17 of the Santa Barbara Municipal Code.

The only Santa Barbara based vessel used for this project includes a small attending tug-the M/V Julie. This vessel would travel approximately 13 nautical miles (15 miles or 24 km) from the Santa Barbara Harbor to the project site.

Ellwood Pier. Venoco's Ellwood Pier is a 2,000-foot long pier off the Santa Barbara County coast, approximately 4,890 feet northwest of the project site. There is regular crew boat traffic between the pier and Venoco's Platform Holly (averaging five trips per day for crew and small material handling). Day-to-day access to the PRC-421 project site will be from Ellwood Pier via small watercraft.

Vessel Traffic. According to the U.S. Department of the Navy (USN, 2000), there are three primary sources of vessel traffic transiting the SCB: military, civilian commercial, and civilian recreational.

Military vessels consist primarily of Navy vessels on mission from Point Mugu. Military vessel activity can be divided into three categories: project ships, project boats, and support boats. Project ships are larger Navy combatant vessels such as destroyers, cruisers, or any large Navy ships directly involved in events. Project boats are smaller vessels directly involved in test or training activities. Support boats are the smallest vessels, which have limited range and usually operate close to shore near Point Mugu and San Nicholas Island (USN 2000).

Commercial vessels enter and traverse the Santa Barbara Channel (SBC) on a routine basis. The Channel is a two-way shipping lane, which generally parallels the coast and runs between the mainland and the Channel Islands (USN 2000). A wide variety of commercial vessels transit the Channel to and from the Port Hueneme Harbor including container carriers, vehicle carriers, bulk ore ships, oil tankers, roll on/roll off ships, and general cargo ships. The size of these ships can range from very large oil tankers over 1,000 feet in length to the smaller general cargo ships whose length can be less than 300 feet. Supertankers entering and leaving the area typically travel south of the Channel Islands (western approach to the harbor) and, for safety reasons, not through the main Channel. The common route for smaller vessels is the SBC route (northern approach to the harbor).

Recreational boats routinely use the SBC as well. These consist of both powerboats and sailboats used for recreational fishing and sightseeing through the channel. Channel Island Harbor (one mile [1.6 km] north of Port Hueneme), Ventura Harbor (7 miles [11.3 km] further north) and the Santa Barbara Harbor (13 miles [21 km] east of the project site) are the primary harbors used by recreational boaters. Private recreational boaters, as well as commercial charters, frequent the Santa Barbara Channel. The destination of the majority of boaters is the

Channel Islands, mainly Anacapa and Santa Cruz Islands for recreation and sportfishing. Most recreational fishermen are attracted to nearshore island shelf waters, especially over kelp beds.

Commercial vessels transiting the SBC utilize a vessel traffic system, consisting of a voluntary Vessel Traffic Separation Scheme (VTSS) established in 1969 by the U.S. Coast Guard. The VTSS consists of a northbound and a southbound lane parallel to one another. The lanes are one mile (1.6 km) wide and are separated by a two-mile (3.2 km) wide separation zone. No structure is permitted within the buffer zone or the shipping lanes. In 1981, the U.S. Coast Guard conducted a vessel routing survey for commercial vessels using the Ports of Los Angeles and Long Beach. The results of the survey indicated 99 percent compliance with the VTSS. The northbound shipping lane (nearer) is approximately 13 miles (21 km) from the project area.

The Santa Barbara County Marine Emergency Management Study (MEMS) provides an analysis of information from Marine Exchange, which provides commercial based traffic data from the Ports of Long Beach and Los Angeles, and information from the Oxnard Harbor District regarding traffic data for Port Hueneme. Vessel traffic figures from 1987 are provided in Table 4.3-3 (County of Santa Barbara Energy Division 1989). These data are from the most recent survey available (NOAA 2000). Approximately 23 vessels per day (8,458 vessels per year) passed through the Santa Barbara VTSS. The majority (84 percent) of vessels were cargo carriers; most of the remainder (12 percent) were tankers. Using regression analysis and assuming that vessel traffic would continue to increase at a level consistent with historic vessel traffic volume figures, the MEMS projected an 82 percent increase in vessel traffic by the year 2000 (an increase from 23.2 to 42.3 vessels per day). This projection may be conservative because not all ports and terminals in southern California were surveyed. This figure was derived without consideration for either potential growth constraints in southern California ports or economic growth trends. In addition, the figure may be misleading because oil companies are now voluntarily routing tankers outside the channel to avoid congestion and provide additional safety within the channel.

Table 4.3-3. Commercial Vessel Traffic through Santa Barbara Channel in 1987

| Port | Vessel Type | Number of Vessels |
|--------------------------|-------------------|-------------------|
| Los Angeles - Long Beach | Cargo | 6,582 |
| | Tanker | 933 |
| | Passenger - Cargo | 60 |
| | Barge | 183 |
| | Lumber | 108 |
| Port Hueneme | Cargo | 212 |
| Santa Barbara | Tanker | 380 |
| Total | | 8,458 |

Source: County of Santa Barbara Energy Division (1989).

Most of the area in the immediate vicinity of the project site is used primarily by small craft, although the nearest marina is approximately 13 miles (21 km) east of the project site at Santa Barbara. The Santa Barbara Harbor is the major launching facility for recreational crafts in Santa Barbara County. The destination of the majority of recreational boaters is the Channel Islands. The Santa Barbara Harbor consists of docking facilities for sailboats, small powerboats, and personal watercraft. The Santa Barbara Harbor contains approximately 1,160 boat slips that are usually 100 percent occupied, as well as charter and rental businesses, boat brokers, shops and restaurants, and a yacht club. Approximately two-thirds of the vessels housed in this facility are sailboats. Vessels servicing offshore platforms may use the Santa Barbara harbor to refuel but they do not load or unload personnel, equipment, or supplies there. Whale watching excursions are popular in the project vicinity.

The Proposed Project is located approximately 500 to 900 feet off the coast with depth ranging from 32 to 15 feet. The ocean waters in the immediate vicinity of the project site are used primarily by commercial fishermen and recreational boaters and fishermen. Recreational boaters and fisherman typically transit the project area in route to a destination, usually the Channel Islands. Due to the close proximity to shore, commercial cargo, and military vessels do not transit the project area. No harbor or launching facilities are located in the immediate project vicinity, so traffic in the project area is minimal and limited to occasional recreational use, typically from the Santa Barbara Harbor.

4.3.1.3 Airborne Transportation

Commercial and recreational aircraft utilize the airspace above the project site. Santa Barbara Municipal Airport is located approximately 3.2 miles (5.2 km) east of the project site. Santa Barbara Municipal Airport is used for both private and commercial flights. Several airlines serve Santa Barbara through this airport including American Eagle, America West Express, Delta, Horizon, and United Express Airlines. There are approximately 43 commercial arrivals and 43 commercial departures per day from the Santa Barbara Municipal Airport (Santa Barbara Airport 2003).

An aerial line transect survey will be performed prior to rapid detonation of the columns. The surveying airplane will be stationed at Santa Barbara Municipal Airport where fueling and other preparatory tasks will take place prior to the pre-explosion survey. The survey will involve an area from the beach to four miles (6.4 km) offshore and four miles to either side of the project site at an altitude of 1,000 ft (305 m). The aircraft will depart the airport and fly approximately east to west, paralleling the shoreline, along a line plotted in advance. At the end of each line, it will make a gradual 180-degree turn, and then travel along another line ¼-mile (0.4 km) from the first. This process will be repeated until the entire area has been surveyed. Care will be taken to avoid flying over the harbor seal colony at Ellwood and various mooring buoys in the area frequented by sea lions.

The principal investigator will have the authority to waive the aerial monitoring in the event a low ceiling or other factor precludes aerial monitoring. Prior to the aerial survey, means of communication will be established between aircraft personnel, onshore personnel, and on-vessel personnel.

4.3.1.4 Project-Related Traffic and Materials Transport Routes

The Proposed Project would include vessel travel between their home ports and the project site. Crew members and other applicable personnel (such as agency observers) will be coming ashore each day to Ellwood Pier via the M/V Julie. Additionally, project construction would involve the conveyance of metal and wood debris from the project site by barge to the Port of Long Beach. The debris hauling for the Proposed Project requires one barge trip and approximately five truck trips. Once the area is surveyed and determined that removal of all debris items is complete, all vessels will be released to transport the salvaged material to shore for recycling and disposal. Steel and wood debris materials from the upper pier structure will be transported in approximately five trips from the project site to the Port of Long Beach at the completion of project activities for transfer to trucks for further transportation to a recycling center within the Long Beach area.

Phase one of the explosive operation includes methods for safe transportation of the explosives to the work site. The explosive shaped charge cutters are fabricated for underwater projects and once assembled and pressure tested, they are properly packaged for shipment as required by U.S. Department of Transportation (DOT) and U.S. Coast Guard. Fabrication of the cutters is at the Jet Research Center manufacturing plant in Alvarado, Texas. Cutters are secured in an approved offshore box/storage magazine, which is then loaded and secured in place on a DOT approved truck for transportation from Alvarado, Texas to the pier removal project site.

4.3.1.5 Applicable Plans and Policies

Agencies with environmental or planning responsibility for the study area ground transportation routes include the Federal Highway Administration, the California Department of Transportation (Caltrans), Santa Barbara County, and the cities of Port Hueneme and Long Beach. Waterborne transportation is overseen by the U.S. Coast Guard. Applicable transportation policies are found primarily in the County of Santa Barbara Comprehensive Plan (1992), and the Goleta Community Plan (Santa Barbara County 1995a). Pertinent guidance from these plans emphasizes the maintenance of safe and acceptable transportation conditions both on area roadways and within port areas.

4.3.2 Impact and Mitigation Measures

4.3.2.1 Methodology

Transportation impacts are typically evaluated on a regional, as well as site-specific level as traffic generated by an action contributes to the overall conditions on area roadways. The project site's location in ocean waters and the phasing of construction activities led to consideration of certain factors in this analysis. Specifically: 1) no land-based vehicles could approach or leave the project site; 2) a minimal number of workers would be involved in the Proposed Project; 3) the post-construction condition of the project site does not warrant significant management or maintenance activities other than the final underwater survey and occasional monitoring and maintenance activities. It was therefore determined that the land

transportation impacts would occur outside the immediate vicinity of the project site and would primarily be short-term construction-related, as the Proposed Project, by nature, would not generate significant long-term traffic increases in the project vicinity.

Based on these assumptions, the analysis of impacts of project construction on project area transportation conditions are based on identification of vessel and traffic safety issues during equipment, materials and personnel transportation to and from the site. In addition, vessel movement's impacts on commercial fishing operations will be addressed.

The majority of staging will be offshore on vessels anchored in the project site. If necessary, Ellwood Pier will serve as the onshore staging area for personnel and materials.

4.3.2.2 Significance Criteria

For the purposes of this analysis, navigation impacts are considered significant if implementation of a proposed action would create a substantial hazard to navigation or substantially affect the ease of navigation in the project area.

Transportation impacts are typically considered significant if implementation of the proposed action would:

1. Cause an increase in traffic that is substantial, as defined below, in relation to the existing traffic volume and capacity of the roadway system;
2. Generate substantial additional vehicular movement;
3. Substantially affect existing parking facilities, or create a demand for new parking;
4. Substantially alter present patterns of circulation or movement of people and/or goods;
5. Substantially alter rail or air traffic; or
6. Substantially increase traffic hazards to motor vehicles, bicyclists, or pedestrians.

A circulation impact on local roadways is deemed to be significant when the level of service (LOS) deteriorates below LOS C conditions, or an increase in V/C ratio of 0.02 occurs at study intersections operating below LOS C conditions. An impact to the regional highway system is deemed to be significant when the level of service deteriorates below LOS D conditions.

4.3.2.3 Transportation Impacts

Short-term impacts. The following is a discussion of project transportation-related impacts during demolition/construction activities.

TRF-1: The Proposed Project will increase traffic on local and regional roads during construction.

Discussion:

Construction activities associated with transporting pier debris to a recycling center would add a maximum of five truck trips from the project area to Long Beach area roadways. The truck trips would occur during recovery and transportation of scrap iron from the upper pier structure.

In addition, during the construction period, approximately 22 workers will commute to the project site each day. It is expected that during the construction period, these workers will temporarily reside within the County of Santa Barbara, and will travel only a short distance to Ellwood Pier for transport offshore. There will not be significant impacts to existing roadways, intersections and freeways in the project area or in the city of Long Beach due to the short duration of the construction period (approximately 26 days), as well as the fact that all affected intersections (see Table 4.3-2) within the Goleta and Long Beach area are currently operating at acceptable levels of service, and that the majority of project-related traffic consists of waterborne traffic.

Santa Barbara Area. Crew members commuting to the project area via Ellwood Pier are likely to come from the Santa Barbara area. These trips are not anticipated to occur during peak hours because of the nature of the work day, i.e., 12 hours on and 12 hours off. There will be no truck traffic for delivery or receipt of project materials in the Santa Barbara area. Based on current LOS conditions within the Santa Barbara area, the temporary addition of 22 crew-member trips will not adversely affect intersection or freeway LOS in the Santa Barbara area.

Long Beach Area. Barges and vessels being utilized for project activities will be mobilized to the project site from Santa Barbara and Long Beach. The vessels and barges will remain onsite for the duration of the project (26 days), so traffic at intersections within the harbor areas will not be impacted by project-related activities. Parking for project personnel will be near the points of departure. Truck traffic associated with transport of the recovered pier materials will consist of a maximum of five truckloads of scrap iron and related materials from the upper structure transferred from the Siuslaw LLB to trucks at the Port of Long Beach for transport to an applicable recycling facility within the Long Beach area.

Impact/Mitigation:

Since the increase in traffic consists of a maximum of five truck trips from the Port of Long Beach to the Long Beach area, and short-term personnel trips in the Santa Barbara area are limited, are not likely to occur during peak hours and intersection levels of service in the

immediate project area are not substantially constrained, the associated impact is not considered to be significant (Class 3). Therefore, no mitigation is required.

TRF-2: Truck-related traffic could potentially present additional safety hazards to existing conditions.

Discussion:

Although the volume of construction-related traffic is not expected to cause decreases in the levels of service on the affected roadways within the Long Beach area, the presence of slow-moving trucks typically represents a safety hazard. However, roadways that would be impacted by construction-related traffic presently experience traffic hazards associated with truck traffic.

Impact/Mitigation:

Due to the low volume of slower moving truck traffic associated with the Proposed Project, coupled with the limited duration of the effect, and the fact that impacted roads already experience this type of traffic, traffic hazards associated with this activity are not considered significant (Class 3). Therefore, no mitigation is required.

TRF-3: The Proposed Project will increase vessel traffic in the project area and within established shipping lanes.

Discussion:

Removal of the remnant pier structure and construction of the roosting/nesting platforms would involve the movement of the Siuslaw LLB and attending tugboat to the project site about 850 feet offshore of the Santa Barbara County coastline where it would remain for the demolition and recovery period. The Siuslaw LLB, Tug Larcona, and M/V Kahu will make a total of one round trip from Long Beach to the project site. The M/V Julie would also be onsite attending the Siuslaw LLB and would travel from Santa Barbara Harbor to the project site. The M/V Julie would make daily trips between the Project site and Ellwood Pier for the transport of project personnel.

These vessels, along with marker buoys, would be present on the project site for approximately 26 days during the pier removal activities. Construction activities would occur during late September and early October to avoid impacting whale migration season, and impacts to commercial fisheries to the greatest extent feasible. Travel to the site will be within established oil service vessel corridors and the presence of the vessels would not interfere with existing waterborne traffic. Information on the Proposed Project will be posted in the USCG Local Notice to Mariners and upon project completion, no vessels will remain at the project site.

Impact/Mitigation:

The Proposed Project will result in a slight increase in vessel traffic in the project area and routes to and from home ports. Due to the short-term nature of these increases, the impact

will not be significant (Class 3). The anchored barges will add to the footprint of the existing PRC-421 pier remnant, a potential hazard to navigation. This short term, incremental increase is also considered not to be significant (Class 3). Therefore, no mitigation is required.

TRF-4: The Proposed Project like the structure it replaces will be a hazard to navigation.

Discussion:

Toppling of the caissons and placement of quarry rock will introduce a permanent hard bottom substrate to the ocean floor approximately 32 feet below the sea surface. This depth would allow sufficient clearance to avoid navigational hazards, and is not a significant impact.

In addition, four bird roosting/nesting platforms, and associated piles will be erected shoreward of the former pier structure. Although the roosting/nesting platforms will be placed within an area previously avoided by vessel traffic due to the remnant pier structure, the addition of these platforms will continue the need for such avoidance.

Impact/Mitigation:

The Proposed Project will result in the replacement of one navigational hazard with another, the introduction of the four piles to which the roosting/nesting platforms will be attached. This is considered to be a significant, but mitigable impact (Class 2).

Mitigation Measure TRF-4:

- Notify NOAA (see address below) regarding new hardbottom substrate and bird roosting/nesting platform placement for inclusion on all future nautical charts.

NOAA Nautical Data Branch
Attn: Ms. Lynn Preston, Chief
N/CS26 Station 7350
1315 East West Highway
Silver Springs, MD 20910

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